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ARCS Equipment

The Air Rescue Communication System is composed of Field Units, which are to be carried by aircraft crews, [REDACTED]

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The system was designed as a means of providing [REDACTED] communications between the field units and a base station capable of automatically recognizing, receiving, and recording the transmissions from the field unit.

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1. ARCS Field Unit Components, Function, and Weight

(a)

[REDACTED]

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- (b) A crystal-controlled, double-conversion superheterodyne receiver.
- (c) A storage battery; 6 cell, 7.5 volt, 5 ampere-hour, nickel-cadmium, capable of operating the transmitter through a minimum of 20 complete cycles with an equal number of 5 minute receiving periods, and 2 vibrator type power supplies.
- (d) Antenna, antenna loading coils, radial ground wires and accessories, and headphones.
- (e) The field unit complete with carrying case weighs 29 pounds and measures 3 1/16" x 11 3/8" x 16 1/4".

2. ARCS Base Station Component Parts

- (a) Receiver racks containing two modified SP-600's for detection and RF amplification, recognition and recorder selector circuits, separate IF channels, and a standard power supply.

- (b) Recorder racks for recording

(c)

[REDACTED]

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2. ARCS Base Station Component Parts (Cont'd)

- (d) Test equipment including a signal simulator, a six beam scope and a Field Test Unit for checking output of the Field Units.
- (e) Additional base equipment for a minimum installation is as follows:

- Message Recorder Rack
- Visual Translator Rack
- Signal Simulator Test Equipment
- 6 Channel Oscilloscope Test Equipment

A second message recorder rack becomes necessary when the anticipated rate of incoming messages becomes high enough so that there is a significant probability that two messages may arrive at the same time, thus allowing both to be recorded simultaneously.

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